

Application No. 10/807,092
Paper dated May 10, 2006
In Reply to USPTO Correspondence of November 10, 2005
Attorney Docket No. 3274-040239

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings of claims in the application:

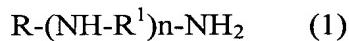
Listing of Claims

Claims 1-13 (Cancelled).

Claim 14 (New): A method of producing soft paper comprising adding a paper additive composition to pulp, the paper additive composition comprising an amide compound (a) or a salt thereof for softening a paper,

wherein the amide compound (a) is obtained by reacting a polyamine and a carboxylic acid,

the polyamine is shown by formula (1):



wherein R is H_2N-R^1 or R^2 , and each R^1 is independently an alkylene group having 1 to 4 carbon atoms, R^2 is an alkyl group or alkenyl group having 12 to 22 carbon atoms, and n is an integer of 1 to 3,

the number of carbon atoms of the carboxylic acid is 10 to 24,

the amide compound is obtained by reacting the carboxylic acid at a ratio of 0.5 to 4.3 moles per 1 mol of the polyamine, and

the ratio of a tertiary amine value to a total amine value of the amide compound (a) is 0.60 to 0.99.

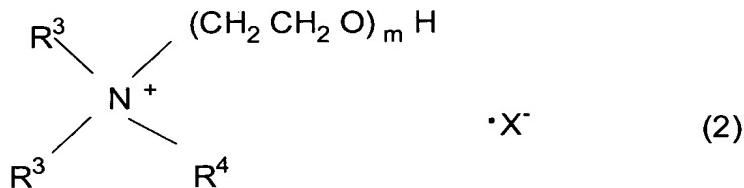
Claim 15 (New): The method of claim 14, wherein the carboxylic acid comprises a carboxylic acid having at least one of an unsaturated bond and a branched chain at a ratio of at least 40 wt%.

Claim 16 (New): The method of claim 14, wherein the amide compound (a) or a salt thereof is added at a ratio of 0.03 to 8 parts by weight with respect to 100 parts by weight of pulp in a process of production of paper.

Claim 17 (New): The method of claim 15, wherein the amide compound (a) or a salt thereof is added at a ratio of 0.03 to 8 parts by weight with respect to 100 parts by weight of pulp in a process of production of paper.

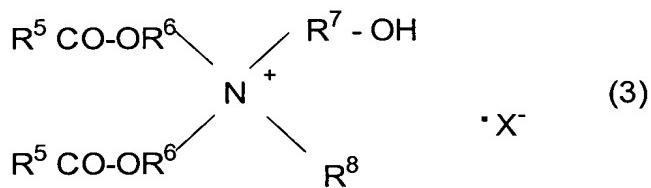
Claim 18 (New): The method of claim 14, wherein the paper additive composition further comprises an ammonium compound (b),

wherein the ammonium compound (b) is at least one selected from the group consisting of a quaternary ammonium salt shown by formula (2):



wherein each R³ is independently a hydrocarbon group having 10 to 24 carbon atoms, R⁴ is an alkyl group having 1 to 3 carbon atoms or a benzyl group, m is 1 to 10 and X⁻ is an anion, and

a quaternary ammonium salt shown by formula (3):



wherein each R⁵CO is independently an acyl group having 10 to 24 carbon atoms, each R⁶ is independently an alkylene group having 2 to 4 carbon atoms, R⁷ is an alkylene group having 2 to 4 carbon atoms, R⁸ is an alkyl group having 1 to 3 carbon atoms or a benzyl group, and X⁻ is an anion, and

a weight ratio of the amide compound (a) or a salt thereof and the ammonium compound (b) is in the range of 100:1-300.

Claim 19 (New): The method of claim 18, wherein the carboxylic acid comprises a carboxylic acid having at least one of an unsaturated bond and a branched chain at a ratio of at least 40 wt%.

Claim 20 (New): The method of claim 18, wherein a mixture of the amide compound (a) or a salt thereof and the ammonium compound (b) is added at a ratio of 0.03 to 8 parts by weight with respect to 100 parts by weight of pulp in a process of production of paper.

Claim 21 (New): The method of claim 19, wherein a mixture of the amide compound (a) or a salt thereof and the ammonium compound (b) is added at a ratio of 0.03 to 8 parts by weight with respect to 100 parts by weight of pulp in a process of production of paper.

Claim 22 (New): The method of claim 14, wherein the paper additive composition further comprises a polyacrylamide compound (c), wherein a weight ratio of the amide compound (a) or a salt thereof and the polyacrylamide compound (c) is in the range of 100:1-200.

Claim 23 (New): The method of claim 22, wherein the carboxylic acid comprises a carboxylic acid having at least one of an unsaturated bond and a branched chain at a ratio of at least 40 wt%.

Claim 24 (New): The method of claim 22, wherein a mixture of the amide compound (a) or a salt thereof and the polyacrylamide compound (c) is added at a ratio of 0.03 to 8 parts by weight with respect to 100 parts by weight of pulp in a process of production of paper.

Claim 25 (New): The method of claim 23, wherein a mixture of the amide compound (a) or a salt thereof and the polyacrylamide compound (c) is added at a ratio of 0.03 to 8 parts by weight with respect to 100 parts by weight of pulp in a process of production of paper.

Claim 26 (New): The method of claim 18, wherein the paper additive composition further comprises a polyacrylamide compound (c), wherein a weight ratio of the amide compound (a) or a salt thereof and the polyacrylamide compound (c) is in the range of 100:1-200.

Claim 27 (New): The method of claim 26, wherein the carboxylic acid comprises a carboxylic acid having at least one of an unsaturated bond and a branched chain at a ratio of at least 40 wt%.

Claim 28 (New): The method of claim 26, wherein a mixture of the amide compound (a) or a salt thereof, the ammonium compound (b), and the polyacrylamide compound (c) is added at a ratio of 0.03 to 8 parts by weight with respect to 100 parts by weight of pulp in a process of production of paper.

Claim 29 (New): The method of claim 27, wherein a mixture of the amide compound (a) or a salt thereof, the ammonium compound (b), and the polyacrylamide compound (c) is added at a ratio of 0.03 to 8 parts by weight with respect to 100 parts by weight of pulp in a process of production of paper.